Executive Summary Conservation Design Resource Manual: Language and Guidelines for Updating Local Ordinances

March 2003

Introduction

In partnership with Chicago Wilderness, the Northeastern Illinois Planning Commission has developed the Conservation Design Resource Manual: Language and Guidelines for Updating Local Ordinances. The resource manual is designed to help communities effectively update local plans and ordinances to be more amenable to conservation design practices.

The development of this resource manual is in support of Chicago Wilderness's *Biodiversity Recovery Plan* for the northeastern Illinois region, published in 1999. With the importance of local government participation in mind, the *Biodiversity Recovery Plan* states the following goal for local governments:

Local and regional development policies should reflect the need to restore and maintain natural areas and biodiversity.

What is Conservation Design?

Conservation design is a design system that takes into account the natural landscape and ecology of a development site and facilitates development while maintaining the most valuable natural features and functions of the site. Conservation design includes a collection of site design principles and practices that can be combined to create environmentally sound development. The main principles for conservation design as defined by the project are:

- 1. flexibility in site design and lot size,
- protection and management of natural areas,
- 3. reduction of impervious surface areas, and
- 4. sustainable stormwater management.

There are many community, environmental, and economic benefits to using conservation design. The most effective way to encourage conservation design is to update local comprehensive plans, codes, and ordinances to reflect the community's commitment to conservation. Most importantly, conservation design should be allowed by right and should be the preferred option for many development projects.

Benefits of Conservation Design

- Reduces construction and infrastructure costs by 11% to 66% (see Chapter 2—Economic Benefits—for full discussion and citations.)
- Preserves natural resources and features.
- Reduces the costs of municipal stormwater management.
- Allows connections to existing natural areas, open space, greenways, and trails.

How is the Resource Manual structured?

The goal of the Conservation Design Resource Manual is to provide ample information about conservation design principles and practices, and to provide the necessary language to enable communities to implement conservation design. The document is structured by practice, so that communities new to conservation design can begin with cautious modifications, while more experienced communities can more fully implement the ordinance revisions, which ultimately will lead to more comprehensive change. Communities that choose to implement conservation design will see a variety of benefits, including reduced flooding, improved water quality, enhanced biodiversity, higher property values, higher property tax revenues, and greater community cohesion.

The first two chapters of the document provide introductory information on conservation design. The first chapter gives basic information about the theory and practice of conservation design. Chapter 2, titled The Economic Benefits of Conservation Design, lists over seventy specific economic benefits to communities, developers, and homeowners of using conservation design practices for development.

Local comprehensive plans, zoning ordinances, and subdivision ordinances are the primary focus of the document. Discussion and language for updating the zoning and subdivision ordinances is provided in the third chapter of the document. In addition, guidance is offered for other community ordinances and documents that should be reviewed for consistency with conservation design goals.

Finally, Chapter 4 contains specific information about conservation design practices and their implementation. The document introduces four guiding principles and thirteen specific site design practices are presented to implement these principles. A list of these appears below. The practices are organized by principle, with each practice being listed under the subsection for the most relevant principle. In each section, the practice is explained and ordinance language is provided. Appendices include definitions, a comprehensive bibliography, detailed information on calculating density for conservation design, incentives for conservation design, and other useful information. The resource manual is structured as follows.

Chapter 1: Introduction to Conservation Design

Chapter 2: Economic Benefits of Conservation Design

Chapter 3: Integrating Conservation Design into Local Plans and Ordinances

Chapter 4: Principles and Practices for Conservation Design

Appendix A: Definitions

Appendix B: Determining the Allowable Density for Conservation Design

Appendix C: Conservation Design Incentives

Appendix D: Special Service Area Financing

Appendix E: CeDES System for Evaluating Conservation Design

Bibliography and Technical Assistance

Principle A

Develop Flexible Lot Design Standards

Practice 1

Lot Size, Density, and Suggested Open Space

Eliminate minimum lot size requirements; rather, regulate overall density of development.

Practice 2

Arranging the Development Site

Maintain critical natural areas. Group buildable lots together to maximize the area of undisturbed land.

Practice 3

Building Setbacks

Eliminate setback requirements for the interior of development sites while maintaining expectations on the perimeter. Maintaining standard setback requirements on the perimeter of the development site eases concerns of neighboring residents and community leaders.

Principle B

Protect and Create Natural Landscapes and Drainage Systems

Practice 4

Natural Area Protection and Conservation

Update ordinances to substantially restrict development on or near natural areas, and require or encourage undeveloped buffers around these areas.

Practice 5

Natural Landscape Sensitivity

Encourage developers to design sites to fit the topography, features, and soils of the natural landscape.

Practice 6

Natural Landscaping

Update landscaping ordinances to encourage the use of plant materials native to northeastern Illinois. Require natural landscaping in and around stormwater facilities, wetlands, lakes, and streams.

Practice 7

Natural Area Management

Require clear specification of how natural areas will be managed, and designate a legal entity responsible for maintenance for all natural areas.

Principle C

Reduce Impervious Surface Areas

Practice 8

Roadway Design

Enact flexible standards for road length, width, rightof-way, and design. Require the minimum amount of paved surface area while maintaining safe and sufficient support of travel lanes, on-street parking, and emergency and support vehicle access.

Practice 9

Parking Lot Design

Enact flexible standards for parking lot design in multifamily housing developments, commercial, and business areas. Require stormwater treatment for parking lot runoff using bioretention areas, filter strips, and/or other practices that can be integrated into required landscaping areas and traffic islands.

Practice 10

Vegetated Swales

Encourage the use of vegetated swales in street rightsof-way, parking lots, and other paved areas to convey and treat stormwater runoff.

Practice 11

Walkways

Establish flexible design standards for walkways that connect residential and natural areas on the interior of the development site.

Practice 12

Driveway Design

Update ordinances to eliminate length and width requirements for driveways, and to permit alternative driveway surfaces and shared driveways that connect two or more homes together.

Practice 13

Roof Runoff Management

Discourage discharge of rooftop runoff into storm sewers. Require or encourage alternative roof runoff management techniques. Encourage green roof designs.

Principle D

Implement Sustainable Stormwater Management Techniques

Urban Runoff Mitigation Plan

If applied, most of the practices discussed in the Chapter 4 affect the rate, volume, and quality of the water managed on-site and directed off-site. In recognition of this fact and in order to fully integrate water management into site design, it is suggested that communities begin revising their subdivision ordinances

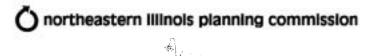
by including the requirement for an Urban Runoff Mitigation Plan. Ordinance language for implementing an urban runoff mitigation plan is included in the document.



Conservation Design Residential Subdivision (Conservation Design Forum, 2003)

For more information or to receive a copy of the Resource Manual contact the Northeastern Illinois Planning Commission or Chicago Wilderness, or download a free copy (in .pdf format) from the websites, www.nipc.cog.il.us, and www.chicagowilderness.org. The Chicago Wilderness website is also an excellent resource for more information about the organization and the Biodiversity Recovery Plan.

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